

Amendments to the Specification

Please add the following new paragraph to the first line of the specification:

This application is a continuation of U.S. Application No. 09/590,558, filed June 9, 2000, now abandoned.

Please replace the paragraph on page 6, starting at line 9, with the following amended paragraph:

According to the invention, ubiquitin promoters are provided which differ from prior ubiquitin promoters primarily in the area of the heat shock region which comprises overlapping heat shock elements, to remove one of the elements, to remove the overlap of the sequences, or to delete both elements entirely. In a preferred embodiment binding domains for transcription factors may be inserted in this area. The interaction between the overlapping heat shock elements and the intron region with the rest of the 5' sequence in the ubiquitin promoter is unknown and was previously thought to be critical for full promoter function. See Quail, supra. Applicants have found that the promoter not only still functions adequately, despite prior teachings to the contrary but quite surprisingly have discovered that engineering in this region increases expression over the previous ubiquitin promoter system and alters the expression ratio of the protein from embryo to endosperm. The Ubi-1 promoter, previously thought to be constitutive has recently been shown to express preferentially in the seed, WO 98/39641 98/139461 published September 11, 1998, making the engineered promoters of the invention with endosperm expression surprising.

Please replace the paragraph bridging pages 51-52 with the following amended paragraph:

Tissue specific expression within the seed was further investigated by dissecting apart embryos and endosperm, and then determining expression levels separately. GSB (wild type) lines have a strong tissue type bias in the expression of GUS, with over 90% of the total activity in the embryo. ~~GSG GSD~~ (3' HSE deleted), GSE (5' HSE deleted) and GSF lines show a lesser degree of embryo preferred expression, GSD (3' ~~HSD~~ HSE deleted) lines have a similar level of GUS in each tissue and GSG (HSE's replaced by PstI trimer) lines have much more GUS in the endosperm. IN fact, with GSG (HSE's replaced by PstI trimer) lines the activity of the engineered Ubi-1 promoter is similar in the embryo and endosperm, but since the endosperm is about 7.5-fold larger than the embryo, most of the GUS is in the embryo.

Please replace Table 4 on page 52 with the following amended Table 4:

TABLE 4

Transformants	Seed fraction	Proportion of GUS
GSB	embryo	0.92
	endosperm	0.08
GSC	embryo	0.89
	endosperm	0.11
GSD	embryo	0.47
	endosperm	0.53
GSE	embryo	0.83
	endosperm	0.17
<del>GSF-GFS</del>	embryo	0.21
GSG	endosperm	0.79
	embryo	0.15
	endosperm	0.85